

```

FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF 111111 111111 111111 XXX XXX
FFF 111111 111111 111111 XXX XXX
FFF 111111 111111 111111 XXX XXX
FFF 111 111 111 XXX XXX
FFF 111 111 111 XXX XXX
FFF 111 111 111 XXX XXX
FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF FFFF FFFF FFFF FFFF 111 111 XXX XXX
FFF 111 111 111 111 111 111 XXX XXX
FFF 111 111 111 111 111 111 XXX XXX
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FFF 111 111 111 111 111 111 XXX XXX
FFF 111 111 111 111 111 111 XXX XXX
FFF 111 111 111 111 111 111 XXX XXX
FFF 1111111111 1111111111 XXX XXX
FFF 1111111111 1111111111 XXX XXX
FFF 1111111111 1111111111 XXX XXX

```

```
SSSSSSSS NN NN DDDDDDDD BBBB BBBB AAAAAA DDDDDDDD
SSSSSSSS NN NN DDDDDDDD BBBB BBBB AAAAAA DDDDDDDD
SS SS NN NN DD DD BB BB AA AA DD DD
SS SS NN NN DD DD BB BB AA AA DD DD
SS SSSSSS NN NN DD DD BB BB AA AA DD DD
SSSSSS SS NN NN DD DD BB BB AA AA DD DD
SS SS NN NN DD DD BB BB AAAAAAAA DD DD
SS SS NN NN DD DD BB BB AAAAAAAA DD DD
SS SS NN NN DD DD BB BB AA AA DD DD
SSSSSSSS NN NN DDDDDDDD BBBB BBBB AA AA DDDDDDDD
SSSSSSSS NN NN DDDDDDDD BBBB BBBB AA AA DDDDDDDD
.....
.....
.....
.....
```

```
LL LL SSSSSSSS
LL LL SSSSSSSS
LL II
LL II
LL II
LL II
LL II
LL II
LL II
LL II
LL II
LL II
LLLLLLLLLL II II SSSSSSSS
LLLLLLLLLL II II SSSSSSSS
SS
SS
SS
SS
SS
SS
SS
SS
SS
SS
```

```
1 0001 0 MODULE SNDBAD (
2 0002 0 LANGUAGE (BLISS32),
3 0003 0 IDENT = 'V04-000'
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
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27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1 ++
32 0032 1
33 0033 1 FACILITY: F11ACP Structure Level 2
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1 This routine sends a message to the bad block analysis program to
38 0038 1 deal with a file that is marked bad.
39 0039 1
40 0040 1 ENVIRONMENT:
41 0041 1
42 0042 1 STARLET operating system, including privileged system services
43 0043 1 and internal exec routines.
44 0044 1
45 0045 1 --
46 0046 1
47 0047 1
48 0048 1 AUTHOR: Andrew C. Goldstein, CREATION DATE: 26-May-1978 14:50
49 0049 1
50 0050 1 MODIFIED BY:
51 0051 1
52 0052 1 V03-007 CDS0006 Christian D. Saether 2-July-1984
53 0053 1 Need to have enhanced privileges for $ASSIGN also.
54 0054 1
55 0055 1 V03-006 CDS0005 Christian D. Saether 20-Jun-1984
56 0056 1 Raise/lower process bioct and astcnt around
57 0057 1 $qio to mailbox so that it does not fail for
```



```
58 0058 1 Lack of those quotas.
59 0059 1
60 0060 1 V03-005 CDS0004 Christian D. Saether 30-Dec-1983
61 0061 1 Use L_NORM linkage and BIND_COMMON macro.
62 0062 1
63 0063 1 V03-004 CDS0003 Christian D. Saether 5-Oct-1983
64 0064 1 Fix bug restoring privs to PCB.
65 0065 1
66 0066 1 V03-003 CDS0002 Christian D. Saether 13-Jan-1983
67 0067 1 Separately save and restore PHD privs.
68 0068 1
69 0069 1 V03-002 CDS0001 Christian D. Saether 28-Dec-1982
70 0070 1 Give the process DETACH and SETPRV for the CREPRC of
71 0071 1 the bad block scanner, and BYPASS to assign channel
72 0072 1 to bad block scanner mailbox.
73 0073 1 Also use PIC_DESC instead of DESCRIPTOR.
74 0074 1
75 0075 1 V03-001 LMP0037 L. Mark Pilant, 28-Jun-1982 15:10
76 0076 1 Remove the addressing mode module switch.
77 0077 1
78 0078 1 V02-003 LMP0013 L. Mark Pilant, 15-Mar-1981 16:20
79 0079 1 Remove unused and unneeded sorage (to fix Linker truncation
80 0080 1 errors).
81 0081 1
82 0082 1 V02-002 ACG0230 Andrew C. Goldstein, 24-Dec-1981 0:17
83 0083 1 Go to general mode addressing for externals
84 0084 1
85 0085 1 V02-001 ACG0167 Andrew C. Goldstein, 16-Apr-1980 19:28
86 0086 1 Previous revision history moved to F11B.REV
87 0087 1
88 0088 1
89 0089 1
90 0090 1 LIBRARY 'SYSS$LIBRARY:LIB.L32';
91 0091 1 REQUIRE 'SRC$:FCPDEF.B32';
```

```
1082 1 GLOBAL ROUTINE SEND_BADSCAN (FID) : L_NORM NOVALUE =
1083 1
1084 1 ++
1085 1
1086 1 FUNCTIONAL DESCRIPTION:
1087 1
1088 1     This routine sends a message to the bad block analysis program to
1089 1     deal with a file that is marked bad.
1090 1
1091 1
1092 1 CALLING SEQUENCE:
1093 1     SEND_BADSCAN (ARG1)
1094 1
1095 1 INPUT PARAMETERS:
1096 1     ARG1: address of file ID of file
1097 1
1098 1 IMPLICIT INPUTS:
1099 1     CURRENT_UCB: UCB of device containing file
1100 1
1101 1 OUTPUT PARAMETERS:
1102 1     NONE
1103 1
1104 1 IMPLICIT OUTPUTS:
1105 1     NONE
1106 1
1107 1 ROUTINE VALUE:
1108 1     NONE
1109 1
1110 1 SIDE EFFECTS:
1111 1     bad block scan process started
1112 1
1113 1 --
1114 1
1115 2 BEGIN
1116 2
1117 2 MAP
1118 2     FID          : REF BBLOCK;    ! file ID argument
1119 2
1120 2 LOCAL
1121 2     PTR          : REF BBLOCK,
1122 2     SAVE_PRIV    : VECTOR [4],
1123 2     DESCO        : VECTOR [2],    ! descriptor
1124 2     MBX_CHANNEL  : WORD;         ! channel number for mailbox
1125 2
1126 2 BIND_COMMON;
1127 2
1128 2 EXTERNAL
1129 2     CTL$GL_PCB    : ADDRESSING_MODE (GENERAL),
1130 2     CTL$GL_PHD    : ADDRESSING_MODE (GENERAL);
1131 2
1132 2 ! Assign a channel to the bad block scanner mailbox. Note that we simply
1133 2 ! give up on errors - the file will be left marked for delete and bad and
1134 2 ! can be picked up and retried later.
1135 2
1136 2
1137 2 PIC_DESC ('ACPSBADBLOCK_MBX', DESCO);
1138 2
149
```



```
150 1139 2 ! We don't need to raise bio, ast counts for the assign, only need detach
151 1140 2 ! for the creprc, but just do it all once for all the services that follow.
152 1141 2
153 1142 2
154 1143 2 PTR = .CTL$GL_PCB;
155 1144 2 PTR [PCBSW-BIOCNT] = .PTR [PCBSW-BIOCNT] + 1;
156 1145 2 PTR [PCBSW-ASTCNT] = .PTR [PCBSW-ASTCNT] + 1;
157 1146 2 SAVE_PRIV [0] = .(PTR [PCBSQ-PRIV]);
158 1147 2 SAVE_PRIV [1] = .(PTR [PCBSQ-PRIV]+4);
159 1148 2 BBLOCK [ PTR [PCBSQ-PRIV], PRVSV_DETACH] = 1;
160 1149 2 BBLOCK [ PTR [PCBSQ-PRIV], PRVSV_SETPRV] = 1;
161 1150 2 BBLOCK [ PTR [PCBSQ-PRIV], PRVSV_BYPASS] = 1;
162 1151 2
163 1152 2 PTR = .CTL$GL_PHD;
164 1153 2 SAVE_PRIV [2] = .(PTR [PHDSQ-PRIVMSK]);
165 1154 2 SAVE_PRIV [3] = .(PTR [PHDSQ-PRIVMSK]+4);
166 1155 2 BBLOCK [ PTR [PHDSQ-PRIVMSK], PRVSV_DETACH] = 1;
167 1156 2 BBLOCK [ PTR [PHDSQ-PRIVMSK], PRVSV_SETPRV] = 1;
168 1157 2 BBLOCK [ PTR [PHDSQ-PRIVMSK], PRVSV_BYPASS] = 1;
169 1158 2
170 P 1159 2 IF NOT $ASSIGN (CHAN = MBX_CHANNEL,
171 1160 2 DEVNAM = DESC0)
172 1161 2 THEN
173 1162 2 BEGIN
174 1163 2 (PTR [PHDSQ-PRIVMSK]) = .SAVE_PRIV [2];
175 1164 2 (PTR [PHDSQ-PRIVMSK]+4) = .SAVE_PRIV [3];
176 1165 2
177 1166 2 PTR = .CTL$GL_PCB;
178 1167 2 PTR [PCBSW-BIOCNT] = .PTR [PCBSW-BIOCNT] - 1;
179 1168 2 PTR [PCBSW-ASTCNT] = .PTR [PCBSW-ASTCNT] - 1;
180 1169 2 (PTR [PCBSQ-PRIV]) = .SAVE_PRIV [0];
181 1170 2 (PTR [PCBSQ-PRIV]+4) = .SAVE_PRIV [1];
182 1171 2
183 1172 2 RETURN
184 1173 2 END;
185 1174 2
186 1175 2 ! Send the message. Then attempt to create the bad block scan process. If one
187 1176 2 ! is already active, the create will fail due to duplicate process names,
188 1177 2 ! and the message will simply be queued.
189 1178 2
190 1179 2
191 P 1180 2 IF $QIO (CHAN = .MBX_CHANNEL,
192 P 1181 2 FUNC = IOS_WRITEBLK OR IOSM_NOW,
193 P 1182 2 EFN = MBX_EFN,
194 P 1183 2 P1 =
195 P 1184 2 BEGIN
196 P 1185 2 ! Construct the message in the message buffer.
197 P 1186 2 !
198 P 1187 2
199 P 1188 2 LOCAL
200 P 1189 2 MESSAGE : BBLOCK [BBSSC_LENGTH]; ! message buffer
201 P 1190 2
202 P 1191 2 CH$FILL (0, BBSSC_LENGTH, MESSAGE);
203 P 1192 2 MESSAGE[BBSSB_MSGTYPE] = MSG$_SCANBAD;
204 P 1193 2 MESSAGE[BBSSW_SEQUENCE] = 0;
205 P 1194 2 MESSAGE[BBSSL_UCB] = .CURRENT_UCB;
206 P 1195 2 CH$MOVE (FID$_LENGTH, .FID, MESSAGE[BBSSW_FID]);
```

```

207      P 1196 2
208      P 1197 2
209      P 1198 2
210      P 1199 2
211      P 1200 2
212      P 1201 2
213      P 1202 2
214      P 1203 2
215      P 1204 2
216      P 1205 2
217      P 1206 2
218      P 1207 2
219      P 1208 2
220      P 1209 2
221      P 1210 2
222      P 1211 2
223      P 1212 2
224      P 1213 2
225      P 1214 2
226      P 1215 2
227      P 1216 2
228      P 1217 2
229      P 1218 2
230      P 1219 2
231      P 1220 2
232      P 1221 2
233      P 1222 2
234      P 1223 2
235      P 1224 2
236      P 1225 2
237      P 1226 2
238      P 1227 2
239      P 1228 2
240      P 1229 2
241      P 1230 2
242      P 1231 2
243      P 1232 2
244      P 1233 2
245      P 1234 2
246      P 1235 2
247      P 1236 1

      MESSAGE
      END
      P2 = BBS$C_LENGTH
    )
  THEN
    BEGIN
      LOCAL
        DESC1      : VECTOR [2],  ! descriptor
        DESC2      : VECTOR [2];  ! descriptor

      PIC_DESC ('SYSS$SYSTEM:BADBLOCK.EXE', DESC0);
      PIC_DESC ('TTA1:', DESC1);
      PIC_DESC ('BADBLOCK_SCAN', DESC2);

      $CREPRC (
        IMAGE      = DESC0,
        INPUT      = DESC1,
        OUTPUT     = DESC1,
        ERROR      = DESC1,
        PRVADR     = UPLIT (-1, -1),
        PRCNAM     = DESC2,
        BASPRI     = 4,
        UIC        = 1*16 + 3
      );

      END;

      $DASSGN (CHAN = .MBX_CHANNEL);

      (PTR [PHD$Q_PRIVMSK]) = .SAVE_PRIV [2];
      (PTR [PHD$Q_PRIVMSK]+4) = .SAVE_PRIV [3];

      PTR = .CTL$GL PCB;
      PTR [PCBSW_BIOCNT] = .PTR [PCBSW_BIOCNT] - 1;
      PTR [PCBSW_ASTCNT] = .PTR [PCBSW_ASTCNT] - 1;
      (PTR [PCBSQ_PRIV]) = .SAVE_PRIV [0];
      (PTR [PCBSQ_PRIV]+4) = .SAVE_PRIV [1];

      ! end of routine SEND_BADSCAN
    END;
  1
```

														.TITLE	SNDBAD												
														.IDENT	\V04-000\												
														.PSECT	\$CODE\$,NOWRT,2												
42	4D	5F	4B	43	4F	4C	42	44	41	42	24	50	43	41	00000	P.AAA:	.ASCII	\ACP\$BADBLOCK_MBX\									
															58	0000F											
42	44	41	42	3A	4D	45	54	53	59	53	24	53	59	53	00010	P.AAB:	.ASCII	\SYSS\$SYSTEM:BADBLOCK.EXE\<0>									
															00	45	58	45	2E	4B	43	4F	4C	0001F			
															00	00	3A	31	41	54	54	5F	00028	P.AAC:	.ASCII	\TTA1:\<0><0>	
00	00	4E	41	43	53	5F	4B	43	4F	4C	42	44	41	42	00030	P.AAD:	.ASCII	\BADBLOCK_SCAN\<0><0><0>									
															00	0003F											
														FFFFFFFF	FFFFFFFF	00040	P.AAE:	.LONG	-1, -1								

SN
VO

• • •

				01FC	00000	.ENTRY	SEND_BADSCAN, Save R2,R3,R4,R5,R6,R7,R8	: 1082
		58	00000000G	00	9E	MOVAB	CTL\$GL_PCB, R8	:
		57	AC	AF	9E	MOVAB	P.AAA,-R7	:
		5E		30	C2	SUBL2	#48, SP	:
18		AE		10	D0	MOVL	#16, DESCO	1137
1C		AE		67	9E	MOVAB	P.AAA, DESCO+4	:
		56		68	D0	MOVL	CTL\$GL_PCB, PTR	1143
			3A	A6	B6	INCW	58(PTR)	1144
			38	A6	B6	INCW	56(PTR)	1145
20		AE	0084	C6	7D	MOVQ	132(PTR), SAVE_PRIV	1146
0084		C6	20004020	8F	C8	BISL2	#536887328, 132(PTR)	1150
		56	00000000G	00	D0	MOVL	CTL\$GL_PHD, PTR	1152
28		AE		66	7D	MOVQ	(PTR), -SAVE_PRIV+8	1153
		66	20004020	8F	C8	BISL2	#536887328, -(PTR)	1157
				7E	7C	CLRQ	-(SP)	1160
			08	AE	9F	PUSHAB	MBX_CHANNEL	:
			24	AE	9F	PUSHAB	DESCO	:
		00000000G	00	04	FB	CALLS	#4, SYSSASSIGN	:
			03	50	E8	BLBS	R0, 1\$:
				0088	31	BRW	3\$:
				7E	7C	CLRQ	-(SP)	1199
				7E	7C	CLRQ	-(SP)	:
12				12	DD	PUSHL	#18	:
	00		6E	00	2C	MOVCS	#0, (SP), #0, #18, MESSAGE	:
			18	AE				:
				28	90	MOVB	#40, MESSAGE	:
	18	AE		AE	B4	CLRW	MESSAGE+4	:
			1C	AA	D0	MOVL	-108(BASE), MESSAGE+8	:
	20	AE		06	28	MOVCS	#6, @FID, MESSAGE+12	:
24	AE	04	BC	AE	9F	PUSHAB	MESSAGE	:
				7E	7C	CLRQ	-(SP)	:
				7E	D4	CLRL	-(SP)	:
			7E	8F	9A	MOVZBL	#96, -(SP)	:
			7E	AE	3C	MOVZW	MBX_CHANNEL, -(SP)	:
				1E	DD	PUSHL	#30	:
				0C	FB	CALLS	#12, SYSSQIO	:
		00000000G	00	50	E9	BLBC	R0, 2\$:
			44	17	D0	MOVL	#23, DESCO	1208
	18	AE		A7	9E	MOVAB	P.AAB, DESCO+4	:
	1C	AE		06	D0	MOVL	#6, DESC1	1209
	10	AE		A7	9E	MOVAB	P.AAC, DESC1+4	:
	14	AE		0D	D0	MOVL	#13, DESC2	1210
	08	AE		A7	9E	MOVAB	P.AAD, DESC2+4	:
	OC	AE		7E	7C	CLRQ	-(SP)	1221
				7E	D4	CLRL	-(SP)	:
			00010003	8F	DD	PUSHL	#65539	:
				04	DD	PUSHL	#4	:
			1C	AE	9F	PUSHAB	DESC2	:
				7E	D4	CLRL	-(SP)	:
			40	A7	9F	PUSHAB	P.AAE	:
			30	AE	9F	PUSHAB	DESC1	:
			34	AE	9F	PUSHAB	DESC1	:
			38	AE	9F	PUSHAB	DESC1	:

00000000G	00	44	AE	9F	000C9	PUSHAB	DESC0	:	
	7E		7E	D4	000CC	CLRL	-(SP)	:	
00000000G	00		0D	FB	000CE	CALLS	#13, SYSS\$CREPRC	:	
	66		6E	3C	000D5	MOVZWL	MBX_CHANNEL, -(SP)	:	1225
	56		01	FB	000D8	CALLS	#1, SYSS\$DASSGN	:	
		28	AE	7D	000DF	MOVQ	SAVE_PRIV+8, (PTR)	:	1227
			68	D0	000E3	MOVL	CTL\$GL_PCB, PTR	:	1230
		3A	A6	B7	000E6	DECW	58(PTR)	:	1231
0084	C6	38	A6	B7	000E9	DECW	56(PTR)	:	1232
		20	AE	7D	000EC	MOVQ	SAVE_PRIV, 132(PTR)	:	1233
				04	000F2	RET		:	1236

; Routine Size: 243 bytes, Routine Base: \$CODE\$ + 0048

: 248 1237 1
: 249 1238 1 END
: 250 1239 0 ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	315	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_ \$255\$DUA28:[SYSLIB]LIB.L32;1	18619	38	0	1000	00:01.9

COMMAND QUALIFIERS

; BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/LIS=LIS\$:SNDBAD/OBJ=OBJ\$:SNDBAD MSRC\$:SNDBAD/UPDATE=(ENH\$:SNDBAD)

; Size: 243 code + 72 data bytes
; Run Time: 00:20.2
; Elapsed Time: 00:38.3
; Lines/CPU Min: 3674
; Lexemes/CPU-Min: 51081
; Memory Used: 248 pages
; Compilation Complete

0173 AH-BT13A-SE
VAX/VMS V4.0

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MAP

SELVOL
LIS

DAPDEF
MOL

SMALOC
LIS

SNOBAD
LIS

SWTTL
LIS

WITURN
LIS